A NEW GEOGRAPHICAL RACE OF AN AUSTRALIAN BUTTERFLY

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Family LYCAENIDAE

Subfamily LUCIINAE

PARALUCIA AENEA LUCIDA, *subsp. nov.*

MALE

Upperside: Forewing dark brown; a broad central bright coppery area including lower half of cell and reaching dorsum; cilia brown with tips whitish.

Hindwing dark brown with a prominent bright coppery area nearly reaching base and bounded by vein 4, extending almost to vein 6 near termen above, by vein 1a below, and by a dark brown narrow band at the termen; two prominent terminal lunular dark brown spots; cilia brown with tips prominently white.

The colour of the copper areas is brighter than in the typical race.

Underside: Forewing pale brown, two spots in cell, two spots below cell, spot at end of cell, a band of discal spots pale brown narrowly edged dark brown.

Hindwing pale brown; a spot in cell, a post cellular, a discal and a sub-terminal, curved series of irregular spots, pale brown, narrowly edged dark brown; a terminal brown line.

FEMALE

Upperside: Forewing as in male; termen strongly convex, copper area slightly paler and more ovoid.

Hindwing as in male but termen more convex; copper area rarely extending almost to base and variable in extent; veins 2, 3, and 4 coppery; two, sometimes three, lunular prominent dark brown subterminal spots.

Underside: As in male, but colour orange brown.

TYPE LOCALITY: Eltham-Greensborough district, Victoria.

TYPES: In collection of author.

DISCUSSION

It was found that male specimens of *P. aenea* from the Eltham-Greensborough district were distinctly brighter than those of all other localities, due to the well defined bright patch of coppery scales on the hindwing above. Comparison of typical males from that district with one identical to the type of *P. aenea* Miskin, 1890, in the Queensland Museum showed that this difference was most pronounced. The male from south Queensland mentioned above, kindly loaned by the Queensland Museum, is shown in Fig. 1 on the accompanying plate.

In general the male hindwing (above) of the typical race from south Queensland has only an ill-defined central copper area, often reduced to a mere suffusion of copper scales, which grades into the brown of the rest of the wing. This is in contrast to the hindwing of *lucida* males, where the coppery colour is sharply defined. The brown area is thus confined to the apical quarter of the wing, above vein 4. There is, without exception, always a small upward extension of the copper area almost to vein 6 near the termen. Furthermore, the extent of the copper area is absolutely constant in the *lucida* race but is very variable in the typical race.

Whereas the area of copper scales is constant in the males, it varies considerably in the females. Some are very bright and correspond to the males, but others have the copper area cut short by an enlargement of the basal brown area outwards; however the copper colour is, in these cases, continued along the veins 2, 3 and 4. Reference to the plate shows the two types of females. Fig. 7 shows a typical light one, with copper patch extending almost to the base, whilst Fig. 8 shows a typical dark form with large dark area extending from base, and the copper colour remaining on the three veins. Fig. 6 is of a typical male, but its different angle to the camera has resulted in poor definition of the copper area.

There are no apparent constant differences between the male and female undersides of the new race and those of the typical race.

The species has been found from southern Queensland to central Victoria, and there are records from Bowen (Miskin), Millmerran, Gayndah, Eidsvold, Brisbane and Killarney in Queensland; Manning River, Armidale, Sydney, Menangle, Wingham, Narrabeen and the Blue Mountains in New South Wales; and Keilor, Castlemaine, Dimboola, Kiata and Nowa Nowa in Victoria. Of specimens examined, only the males from Dimboola and Kiata approach those of the *lucida* race. Exceptionally dark males are taken at Nowa Nowa and these are *P. aenea aenea* Miskin. One of these is figured (Fig. 3), as is also a small example from Blackheath, Blue Mountains. It seems that the typical race extends from south Queensland to the Lakes Entrance district of eastern Victoria and also inland in the Blue Mountains. Further work is necessary to determine the distribution of the new race. Anderson and Spry (1893) record the species from the Goulburn Valley and it may prove that the race in that district is *lucida*.

The larvae feed on *Bursaria spinosa*, usually when it is growing in dry localities, and are generally found below ground level on the stem or roots. There are almost always a few small ants in attendance. The larvae also pupate in these positions. The larvae and pupae are very similar both in form and habits to those of *P. aurifer* Blanchard. At Eltham the first imagoes emerge usually during the first week of December and specimens are most numerous at about Christmas time, after which they gradually diminish. Occasional specimens may be taken early in February.

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BIBLIOGRAPHY

1. *Proc. Lin. Soc. N.S.W.*, 2nd series, Vol. V, 1890. W. H. Miskin, "Descriptions of Hitherto Undescribed Australian Lepidoptera."
2. *Victorian Butterflies*—Anderson and Spry, 1893.
3. *Australian Butterflies*—Waterhouse and Lyell, 1914.
4. *What Butterfly Is That?*—Waterhouse, 1932.

EXPLANATION OF PLATE

Fig. 1. Male *P. aenea* Miskin, corresponding to type from National Park, Queensland (8.3.'29).
2. Small male *P. aenea* from Blackheath, Blue Mountains, N.S.W. (18.2.'41).
3. Dark male of *P. aenea* from Nowa Nowa, Victoria (5.2.'49).
4, 5 and 6. Typical males of *P. aenea lucida*, subsp. nov., from Eltham, Victoria (23.12.'49).
7. Light form of female of *P. aenea lucida* from Eltham (26.12.'49).
8. Dark form of female of *P. aenea lucida* from Eltham (20.12.'49).
9. Female of *P. aenea aenea* from Nowa Nowa, Victoria (15.2.'49).

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